

ADDITIONAL FEE:

Please charge any insufficiency of fee, or credit any excess, to Deposit Account No. 50-0427.

R E M A R K S

The Office Action issued June 23, 2005 has been received and its contents have been carefully considered.

In view of the objection to the disclosure (page 2, first paragraph, of the Office Action) and to the multiple dependent claims (page 2, second paragraph), applicant assumes that his Preliminary Amendment, filed together with the remaining papers for this application, has been mislaid.

Enclosed herewith is a copy of this Preliminary Amendment, dated August 19, 2003, plus a copy of applicant's return-address postcard, filed with the application and returned by the U.S. Patent and Trademark Office, confirming that this Preliminary Amendment accompanied the application papers.

Accordingly, it is respectfully requested that this Preliminary Amendment now be entered in this application.

The present Amendment assumes that this Preliminary Amendment has been entered.

The Examiner's various objections to the form of claims 1-5 are well taken. These claims have now been amended to overcome the Examiner's objections and to render them clear and definite.

Claim 1, the only independent claim in this application, has been rejected under 35 U.S.C. §102(b) as being fully anticipated by the U.S. Patent No. 3,302,412 to Hunsucker. This rejection, as it may apply to claim 1 as presently amended, is respectfully traversed for the reasons given below.

Hunsucker teaches the use of well-known flat sheet piles which are provided at both ends with conventional connecting sections for connecting the flat sheet piles with one another.

This type of flat sheet piles has been known for years and is offered by most of the sheet pile producers, for example the Chaparral Steel. A copy of a data sheet, downloaded from the home page of Chaparral Steel and attached to this Amendment, illustrates this type of standardized flat sheet piles.

This standardized flat sheet pile is provided at both distal ends with identical connecting sections. These

identical connecting sections are integrally formed with the sheet pile, or in other words the sheet pile and the connecting sections are formed out of one piece.

The connecting sections, in turn, are both formed by a finger strip and a thumb strip. The finger strip and the thumb strip encircle a continuous cavity, wherein the finger strip and the thumb strip are kept at a distance, so that a narrow lateral entrance slot into the cavity. The thumb strip has a relatively thin portion of lesser width than the entrance slot and has a relatively thick portion of greater width than that of the entrance slot.

In order to connect two flat sheet piles the thumb strip of the one sheet pile is introduced into the cavity of the other flat sheet pile or vice versa. As a result, a so-called "three-point connection" is established between the connecting sections of the two flat sheet piles.

This type of connection between sheet piles, which is described in Hunsucker in column 2, lines 5 to 17, and is shown in Hunsucker in Figures 1 and 2, is quite well known as noted above.

In the two-piece joining device according to the invention each of the joining elements is provided with a

base which is used for affixing the respective joining element, normally by welding, to a sheet pile component.

This is explained in the second and fourth paragraph on page 1 of applicant's specification and is recited in the preamble of claim 1.

It is possible in this way to provide sheet pile components with the two-piece joining device wherever it is necessary.

With Hunsucker, in contrast, the connecting sections are formed integrally with the sheet piles and cannot be fixed to the sheet pile at a later stage. Consequently, the connecting sections can also not be provided with a "base" in the sense of the present invention.

Further, the connecting principle of the joining elements defined in claim 1 is based on the so-called "ball-and-socket" connection: a different connecting principle than the connecting principle of the sheet piles described in Hunsucker.

In the ball-and socket connection one joining element is provided with a so-called "button strip", formed at the end of a so-called "neck strip". The other joining element to be connected to the button strip is provided with two

hook strips which form a cavity. An entrance slot into the cavity is provided between the ends of the hook strips. In order to connect the two joining elements, the button strip is introduced into the cavity so that the button strip is kept between the hook strips in the cavity.

According to the invention, one of the joining elements is provided with such a neck strip and a button strip, while the other joining element is provided with two hook strips.

Since the joining elements according to the invention are used in cases where high tensile forces occur, the tensile forces may be so high that the ball-and-socket connection elements are bent and detached from each other. This can be taken from the first paragraph on page 3 of the specification.

In order to prevent such a bending and detachment of the ball-and-socket connection, the first joining element, which is provided with the button strip, is additionally provided, at least at some points, with the holding portions that project away from the base and are arranged on both sides of the button strip.

When the two joining elements are connected, the button strip of the first joining element is arranged within the

cavity between the two hook strips of the second joining element, while the holding portions of the first joining element embrace the outer sides of the hook strips. This prevents a widening of the hook strips in cases of high tensile forces between the two joining elements.

When directly comparing the connecting sections disclosed in Hunsucker and the two-piece joining element defined in claim 1, it is apparent that in Hunsucker identical connecting sections are used, while according to the invention the two joining elements are designed differently.

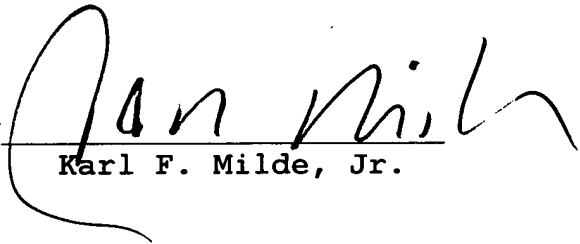
Further, the connecting sections disclosed in Hunsucker are integrally formed with the sheet pile while according to the invention the proposed two-piece joining device is only used in those cases in which a very strong connection between two sheet pile components is to be realized. In this case the two joining elements are affixed to the two sheet pile components to be connected.

Finally, the design of the identical connecting sections disclosed in Hunsucker cannot prevent a bending of the finger strips if high tensile forces occur between the connected sheet piles. Contrary to this and according to

the invention, the two holding portions of the first joining element support the hook strips of the second joining element to prevent them from spreading apart.

Since all of the formal objections raised by the Examiner have been overcome by this Amendment, and since claim 1, as presently presented, distinguishes patentably over the patent to Hunsucker, this application is believed to be in condition for immediate allowance. A formal Notice of Allowance is accordingly respectfully solicited.

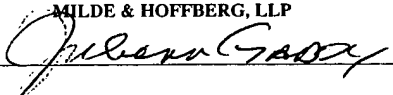
Respectfully submitted,

By 
Karl F. Milde, Jr.

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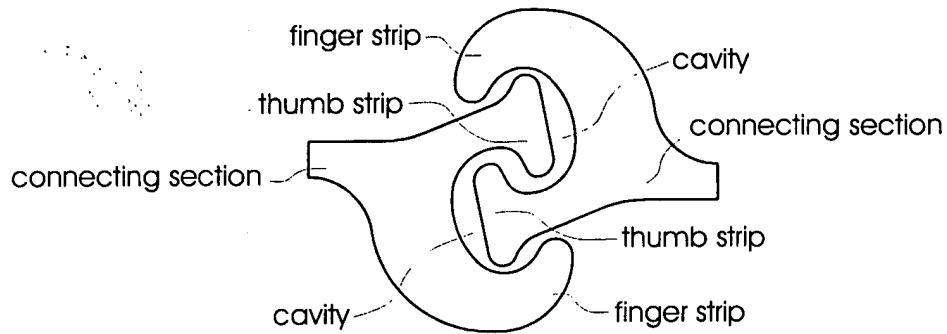
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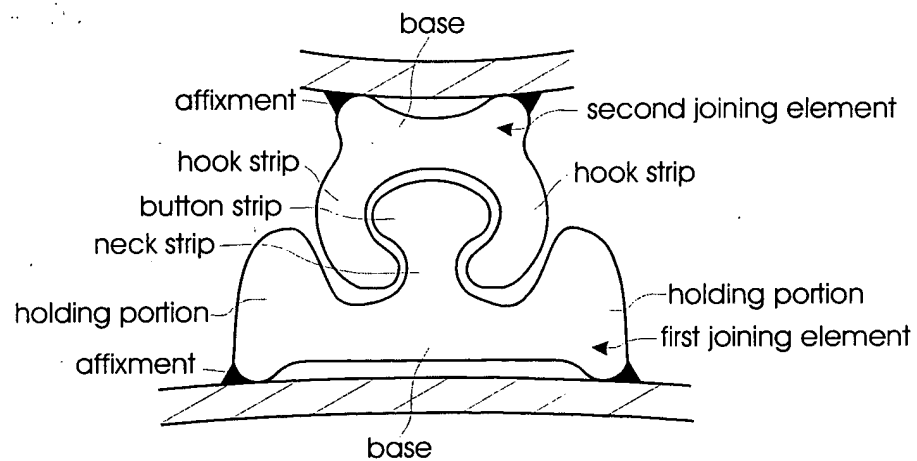
SEPTEMBER 22, 2005
MILDE & HOFFBERG, LLP
By 
Date SEPTEMBER 22, 2005



Prior Art:



Invention:





Flat Sheet Piling

Dimensions and Properties

CHAPARRAL

300 Ward Road
Midlothian, Texas 76065 U.S.A.

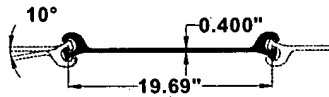
Phone: (972)299-5212 Extension 1251 or 1078

Fax: (972)779-1236

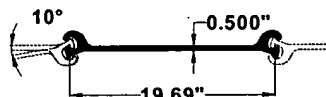
www.chapusa.com

www.sheet-piling.com

PS 27.5



PS 31.0



Section Designation	Nominal Width	Web Thickness	Per Single Section				Per Foot of Wall		
			Weight per Foot	Moment of Inertia	Section Modulus	Nominal Coating Area	Weight per Foot	Moment of Inertia	Section Modulus
	in.	in.	lbs/ft	in. ⁴	in. ³	ft ² /ft	lbs/ft	in. ⁴ /ft	in. ³ /ft
PS 27.5	19.69	0.400	45.2	5.0	3.2	3.68	27.5	3.0	1.9
PS 31.0	19.69	0.500	50.9	5.0	3.2	3.68	31.0	3.0	1.9

Section Designation	Nominal Width	Web Thickness	Per Single Section				Per Meter of Wall		
			Weight per Meter	Moment of Inertia	Section Modulus	Nominal Coating Area	Weight per Meter	Moment of Inertia	Section Modulus
	mm	mm	kg/m	cm ⁴	cm ³	m ² /m	kg/m	cm ⁴ /m	cm ³ /m
PS 27.5	500	10.2	67.2	208	52	1.12	134.5	416	104
PS 31.0	500	12.7	75.8	208	52	1.12	151.5	416	104

PS 27.5 and PS 31.0, when properly interlocked, develop a minimum ultimate interlock strength of 16 kips/inch (2800 KN/meter)
Higher interlocks strengths are available upon request.

Connectors for all Chaparral piling products can be found at www.pilepro.com

Additional information regarding The Open Cell Design utilizing PS sections can be found at www.opencell.us



HBC 251-KFM
17657-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : GEORG WALL
Serial No. : TO BE ASSIGNED
Filed : HEREWITH
For : TWO-PIECE JOINING DEVICE FOR SHEET PILE
RETAINING WALLS

August 19, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

PRELIMINARY AMENDMENT

Prior to examination, please amend the above-identified
patent application as follows:

IN THE SPECIFICATION:

On page 1, after the title, insert the following heading:

BACKGROUND OF THE INVENTION;

On page 2, after line 26, insert the following heading:

SUMMARY OF THE INVENTION

On page 4, delete lines 3-6 and insert the following paragraph and heading:

For a full understanding of the present invention, reference should now be made to the following detailed description of the preferred embodiments of the invention as illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS;

and after line 12, insert the following heading and paragraph:

DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment of the present invention will now be described with reference to Figures 1 and 2 of the drawings. Identical elements in the two figures are designated with the same reference numerals.

On page 7, after the last line, insert the following paragraph:

There has thus been shown and described a novel two-piece joining device for sheet pile retaining walls which fulfills all the objects and advantages sought therefor. Many changes, modifications, variations and other uses and applications of the subject invention will, however, become apparent to those skilled in the art after considering this specification and the accompanying drawings which disclose the preferred embodiments thereof. All such changes, modifications, variations and other uses and applications which do not depart from the spirit and scope of the invention are deemed to be covered by the invention, which is to be limited only by the claims which follow.

IN THE ABSTRACT:

In the title, change "Abstract" to

ABSTRACT OF THE DISCLOSURE

and delete line 14.

IN THE CLAIMS:

In line 1, delete "Claims" and insert:

C L A I M S

What is claimed is:

Please amend claims 1-5 to read as follows:

1. (Currently Amended) A In a two-piece joining device ~~(1, 1')~~ for sheet pile retaining walls, which ~~consists of~~ comprises two interlocking, strip-shaped joining elements ~~(2, 2', 3, 3')~~ for connecting two adjacent individual sheet piling elements ~~(5, 11)~~ of the sheet pile retaining walls, e.g., a sheet piling, which are to be pile-driven in each case, the first joining element ~~(2, 2')~~ being affixable with a base ~~(4)~~ to the first individual sheet piling element ~~(5)~~ and comprising a neck strip ~~(8)~~ projecting away from the base ~~(4)~~ and the individual sheet piling element ~~(5)~~ and an adjoining button strip ~~(9)~~ and the second joining element ~~(3, 3')~~ being affixable with a base ~~(10)~~ to another individual sheet piling element ~~(11)~~ and comprising two hook strips ~~(14)~~ projecting away from the base ~~(10)~~ and the individual element ~~(11)~~, which define between them a hollow space ~~(15)~~ so that it is held in the hollow space, (15),

~~characterized in that~~ the improvement wherein the base (4) of the first joining element (2, 2') comprises on its two longitudinal sides, at least at some points, holding portions (16, 16') projecting away from the base (4), which embrace the outer sides of the hook strips (14, 14') of the second joining element (3, 3') at least partly and prevent a widening of the hook strips (14, 14') in the case of tensile forces between the two individual sheet piling elements (5, 11).

2. (Currently Amended) A joining device according to claim 1, ~~characterized in that~~ wherein the holding portions are holding strips (16, 16').

3. (Currently Amended) A joining device according to claim 1, ~~or 2, characterized in that~~ wherein the holding portions (16, 16') extend along the entire length of the base (4) of the first joining element (2, 2').

4. (Currently Amended) A joining device according to ~~any of the preceding claims,~~ claim 1, wherein the hook strips (14') of the second joining element (3') are

provided with a button strip (18) each on their ends and ~~that~~ wherein the holding portions (16') of the first joining element (2') encompass these button strips (18) at least partly.

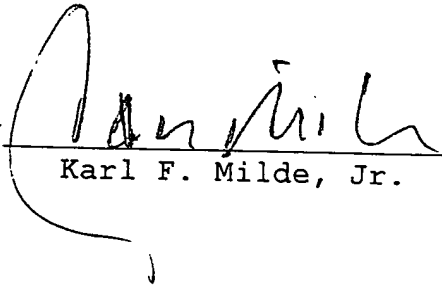
5. (Currently Amended) A joining device according to ~~any of the preceding claims, characterized in that that~~ claim 1, wherein the joining elements (2, 2', 3, 3') are extruded steel profiles.

R E M A R K S

These amendments are being made to eliminate multiple dependencies and to place the specification, claims and Abstract in proper form under U.S. Patent Practice. No new matter has been added.

Respectfully submitted,

By


Karl F. Milde, Jr.

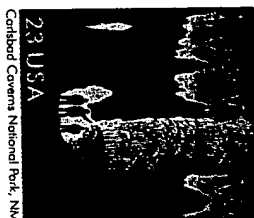
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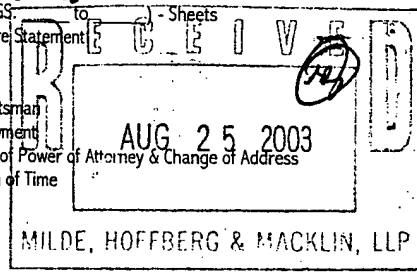
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08/19/03



Case No. HBC 251
Serial/Parent No. To Be Assigned
Mailing Date: 8-19-03
Due Date: 8-27-03

New US App of George Wall - Two Piece Joining Device
The Patent & Trademark Office acknowledges, and has stamped
hereon the date of receipt of the items checked below: *In Street File Retaining Wall*

- ☐ Abstract
 - ☒ Amendment - Pages 9 (Preliminary)
 - ☒ Application - Pages 7
 - ☐ Assignment
 - ☐ Assignment Recordation Sheet
 - ☒ Check(s) for \$ 375 (CA & 6400)
 - ☒ Claims - Pages 2 (Claims 1-5)
 - ☐ Declaration and Power of Attorney
 - ☒ Drawings - Sheets 2 (FIG 1-2)
 - ☐ Formal Drawings (FIGS. to Sheets)
 - ☐ Information Disclosure Statement
 - ☐ Issue Fee Payment
 - ☐ Letter/Response
 - ☐ Letter to Official Draftsman
 - ☐ Maintenance Fee Payment
 - ☐ Notice of Revocation of Power of Attorney & Change of Address
 - ☐ Petition for Extension of Time
 - ☐ Priority Document
 - ☒ PTO Form 1082
 - ☐ PTO Form 1449
 - ☐ References -
 - ☒ Postcard
- State 141(e) of Karl Milde*



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